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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,510	07/08/2003	Minoru Uematsu	4432-0102P	7613

2292 7590 05/18/2006

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EXAMINER

HORWAT, JENNIFER A

ART UNIT	PAPER NUMBER
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3768

DATE MAILED: 05/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/614,510

Applicant(s)

UEMATSU, MINORU

Examiner

Jennifer Horwat

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,9,10,18,19 and 25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,9,10,18,19 and 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 3/9/2006 have been fully considered but they are not persuasive. Claim 1 has been amended to include specifically a linear moving mechanism for a CT scanner and a bed. As seen in figure 1 of Oota, as pointed out in the previous Office Action, a common bed is moved linearly between multiple imaging systems. The systems themselves additionally have means for moving linearly. Applicant argues that the system disclosed by Oota does not show a system including an irradiation apparatus. Irradiation is defined as "exposure to radiation such as ultraviolet light, x-rays, or alpha particles". The device disclosed by Oota clearly includes an x-ray tube and x-ray detector on a c-arm apparatus that irradiates the subject, which further is parallel to the CT apparatus. Applicant argues that Oota does not show linear moving mechanisms that cross one another, however as seen in figure 1 the moving mechanisms of the systems move perpendicularly to one another, or cross one another, as shown by the arrows labeled A, C, D, and H.
2. Applicant's arguments with respect to the combination of Oota and Nambu have been considered but are not persuasive. Oota states that additional advantages and modifications will readily occur to those skilled in the art. Including both linear and curved motion is an obvious modification as it allows flexibility in the set up of the system and allows for the inclusion of any number of imaging and treatment systems to be combined. Applicant appears to be arguing that the two systems are not physically

combinable due to the difference is rotational and linear movement. However, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1, 9, 10, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nambu, et al (US 5615430) in view of Oota (US 2002/0039403). Nambu discloses a composite irradiation system comprising a CT-scanner, irradiation apparatus, and x-ray simulator (col 7, lines 36-64) that use a common bed (figure 10) so that the patient does not have to be moved from bed to bed between imaging systems. The bed is capable of movement in both a linear and curved movements, as shown in figure 9, and may also rotate on a turntable mount on the floor face (figure 1), which is an isocentric rotation mechanism. The system disclosed by Nambu does not include movement of the CT-scanner, irradiation apparatus, or x-ray simulator. However, Oota discloses a system for interventional radiology-computed tomography apparatus (IVR-CT), which also consists of a CT-scanner and irradiation apparatus, in the form of an x-ray device, in which the CT and x-ray systems are moveable on rails on both the floor

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and the ceiling (figure 1). Oota teaches a variety of movements of the systems which cross each other, as seen in the movements along axes A and H, move in the same direction, as seen in the movements along axes A and I, and curvedly moving, as seen in the movements along axes B and E. In addition, the direction of movement of the bed crosses the direction of movement of both systems as it moves along axis C, which is perpendicular to axes A and I. The bed is additionally adjustable both vertically and laterally, along axes C and D, for appropriate positioning of the patient. It is an obvious modification to apply the movements taught by Oota to the three systems disclosed by Nambu. The bed may move into the CT scanner (figure 1, element 2) such that the affected portion is in the center of the gantry, which preferable, as the center is where the beam is located as the gantry rotates allowing for imaging of the desired portion. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system disclosed by Nambu with the teachings of Oota in order to allow the combined system disclosed by Nambu to include additional linear movements providing for a system which advantageously allows flexibility in the set up of the system and allows for the inclusion of any number of imaging and treatment systems to be combined and used together.

5. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nambu in view of Oota as applied to claim 1 above, and further in view of Shepherd, et al (US 5537452). Nambu in view of Oota, as discussed above, substantially discloses the invention as claimed, however fails to explicitly disclose a CT system with a diameter of a size to receive a common bed that is moved laterally within

the bore. Shepherd also discloses a system for determining accurate positioning using a CT scanner including treatment with a radiation therapy system and additionally teaches that positioning adjustment means are included to allow the common bed to be moved from one system to another including centering the table laterally in the CT unit opening including adjustment to allow the table to be in the appropriate position for imaging (col 5, lines 55-60). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosures of Nambu and Oota in light of the teachings in the reference by Shepherd, as Shepherd states including such positioning means allows for improved localization of radiation dose and targeting (col 2, lines 1-12).

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer Horwat whose telephone number is (571) 272-2811. The examiner can normally be reached on M-Th 7-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eleni Mantis-Mercader can be reached on (571) 272-4740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jah
5/12/06


ELENI MANTIS-MERCADER
PRIMARY EXAMINER